AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-20. (canceled)

21. (currently amended) A method for manufacturing a membrane electrode assembly using an ion conducting membrane, comprising the steps of:

providing an ~~ion conducting~~ ion-conducting membrane in a pre-swollen state being impregnated with a ionomer;

~~after the swelling step,~~ drying the pre-swollen ion-conducting membrane at elevated temperatures in order to remove residual solvent and to transform the ionomer into the form of an insoluble solid;

after the drying step, re-swelling the ion-conducting membrane by immersing the ion-conducting membrane in a solvent;

coating of the ion conducting membrane on both sides with an electrode layer to form a sandwich; and

hot-pressing the sandwich to form an ion conducting bond between the ion-conducting membrane and the electrode layers;

wherein the ion conducting membrane is impregnated with an ionically conducting polymeric phase;

wherein a duration of the re-swelling step is 4-5 hours.

22. (previously presented) The method according to claim 21, wherein a catalytic active layer is disposed between the electrode layer and the ion conducting membrane on both sides of the ion conducting membrane.

23. (previously presented) The method according to claim 21, wherein the electrode layer comprises one of a carbon cloth, carbon paper and a carbon felt.

24. (currently amended) The method according to claim 21, wherein the hot-pressing condition are selected from at least one of the following conditions:

a) temperature in the range of ~~70 to150 C~~ 70 to 150 °C;

b) pressure in the range of 2 to 30 MPa; and

c) duration time of hot-pressing treatment in the range of 15 to 400 seconds.

25. (previously presented) The method according to claim 21, wherein the catalytic active layer comprises at least one selected from the group containing platinum, ruthenium, rhodium, rhenium, nickel, rare earth and transition metals and compounds thereof.

26. (currently amended) A membrane electrode assembly, manufactured according to claim 21, comprising a hot pressed sandwich comprising:

a first electrode layer;

a second electrode layer; and

an ion conducting membrane disposed between the first and second electrode layers;

wherein the ion conducting membrane is in a pre-swollen status prior to the hot-pressing.

27. (previously presented) The membrane electrode assembly according to claim 26, wherein the depth of the ion conducting membrane is in the range of 5 to 250µm .

28. (previously presented) Method according to claim 22, wherein the electrode layer comprises one of carbon cloth, carbon paper and a carbon felt.

29-31. (canceled)

32. (currently amended) A method according to claim 21, wherein the ion conducting membrane is exposed to a polar and hydrogen-bonding solvent.

33. (previously presented) A method according to claim 21, wherein the hot-pressing conditions are selected from at least one of the following conditions:

a) temperature in the range of 90 to 120 °C;

b) pressure in the range of 5 to 18 MPa; and

c) duration time of the hot-pressing treatment in the range of 60 to 240 seconds.

34. (previously presented) A membrane electrode assembly according to claim 26, wherein a depth of the ion conducting membrane is in the range of 20 to 200 μm.

35. (currently amended) A method according to claim 22, wherein the electrode layer is exposed to a polar and hydrogen-bonding solvent.

36. (canceled)

37. (currently amended) A method for manufacturing a membrane electrode assembly using an ion-conducting ~~ion conducting~~ membrane, comprising steps of:

swelling the ion-conducting membrane by immersing the ion-conducting membrane in an ionomer solution;

after the swelling step, drying the ion-conducting membrane at elevated temperatures in a range from 120 to 140 °C

so as to transform the ionomer into ~~a form of~~ an insoluble solid, and so that the ion conducting membrane is impregnated with an ionically conducting polymeric phase;

after the drying step, re-swelling the ion-conducting membrane by immersing the ion-conducting membrane in a solvent;

coating the ion-conducting ~~ion conducting~~ membrane on both sides with an electrode layer to form a sandwich; and

hot-pressing the sandwich to form an ion conducting bond between the ion-conducting membrane and the electrode layers;

wherein the re-swelling step is performed using water at room temperature.

38. (previously presented) The method of claim 37, wherein the hot-pressing step is performed while the ion-conducting membrane is still in a wet state from the re-swelling step.

39. (new) The method of claim 21, wherein the re-swelling is performed in water at approximately 80°C.